

# SCIENTIFIC AMERICAN

## CONTENIDO

### VOLUME 303 No. 3 SEPTEMBER 2010

#### INTRODUCTION

- 38 **Eternal Fascinations with the End.**  
Why we want to believe that this is humanity's final hour.  
*Michael Moyer.*

#### MEDICINE

- 42 **Why Can't We Live Forever?**  
By unraveling the mysteries of aging, scientists may be able to extend our lives.  
*Thomas Kirkwood.*

#### BIOETHICS

- 50 **When Does Life Belong to the Living?**  
Some doctors think we shouldn't wait for donors to die before removing their organs.  
*Robin Marantz Henig.*

#### FORENSICS

- 56 **Dust to Dust.**  
The brief, eventful afterlife of a human corpse.  
*Arpad A. Vass.*

#### ANTHROPOLOGY

- 60 **Last of Their Kind.**  
As cultures die, knowledge dies with them.  
*Wade Davis.*

#### TECHNOLOGY

- 68 **Good Riddance.**  
Some human inventions deserve to go.

#### ENVIRONMENT

- 74 **How Much Is Left?**  
The lowdown on the planet's dwindling resources.  
*Michael Moyer.*

#### RISK ANALYSIS

- 82 **Laying Odds on the Apocalypse.**  
How experts see the likelihood of eight doomsday scenarios.  
*John Matson.*

#### COSMOLOGY

- 84 **Could Time End?**  
Recent work in physics suggests a resolution to the paradox of time.  
*George Musser.*

## RESTART

- 92 **What Comes Next.**  
Scientists give their visions of what the future holds.

## DEPARTMENTS

- 6 **From the Editor**

- 8 **Letters**

- 12 **50,100 and 150 Years Ago**

- 14 **News Scan**

### RESEARCH & DISCOVERY

- Unifying physics.
- Graphite on the moon.

### ENERGY & ENVIRONMENT

- Acid rain is back.
- Dispersant toxicity.

### MEDICINE & HEALTH

- Stem cell ethics.
- Safe antiobesity drugs?
- Rejected? Try a Tylenol.

### TECHNOLOGY

- Quantum light switch.
- Programmable matter.

- 30 **Perspectives.**  
The FDA should demand strong scientific evidence for health claims on food packaging.  
*The Editors.*

- 32 **Sustainable Developments**  
Too many global-scale problems remain unresolved.  
*Jeffrey D. Sachs.*

- 34 **Skeptic**  
Mixing science and politics is tricky but necessary for a functioning democracy.

*Michael Shermer.*

- 36      **Critical Mass.**  
Writing about science and society invites powerful reactions from both sides of the fence.  
*Lawrence M. Krauss.*
- 100     **Ask the Experts.**  
How does geothermal drilling trigger earthquakes?
- 102     **Recommended.**  
Extreme astronomy. Misleading math.  
Genome on the cheap.
- 104     **Anti Gravity.**  
In Italy, scientists face legal peril for failing to do something that is not even possible.  
*Steve Mirsky.*
- 88      **Ask the Experts**  
How does gene therapy work?  
Why does bread go stale?